

Since this table was published I have obtained from Bedruthan a slab on which there are fragments of *Pteroconus mirus*, and another organism of which Dr. Smith Woodward writes: "I think the reticulated piece belongs to *Pteraspis*, but it would have been more satisfactory to find the outer striated layer." HOWARD FOX.

FALMOUTH, January 5th, 1903.

#### THE GEOLOGY OF BARBADOS.

SIR,—My extended acquaintance with the geology of Barbados has led me to concur fully in the last paragraph of the recent article on the subject by Professor Harrison and Mr. Jukes-Browne, and especially in the admission of these authors that "fresh observations are required." For some weeks prior to the appearance of the article, indeed, I had been in correspondence with one of the authors of the article, who proposed a joint re-examination of the ground; I immediately accepted the suggestion, and began planning another trip to Barbados with the object of demonstrating my observations on the ground, and, if practicable, making additional collections of fossils; and I had hoped that public discussion would be withheld pending this appeal to the court of field observation. In view of the prospective meeting on the ground, I am content to withhold detailed criticism of the article in question, and especially of the restricted view taken by the authors, who seem satisfied to discuss the geological history of a single spot in a great province without reference to the records presented by other portions of the same province. I am confident that the joint work on the ground will enable me to present this broader view, as well as the local details, more successfully than I have been able to do in print. "In the meantime" I venture to hope that readers will "suspend their judgment on the questions raised" by the paper of Prof. Harrison and Mr. Jukes-Browne.

J. W. SPENCER.

WASHINGTON, December 19th, 1902.

#### CLASSIFICATION OF THE LOWER CHALK OF NORTH GERMANY.

SIR,—There is a curious error in the Short Notice of Dr. A. von Koenen's paper "Ueber die Gliederung der norddeutschen Unteren Kreide" in your December number. The reviewer implies that the result of the learned author's revised classification is to regard the Aptien, Barrémien, Hauterivien, and Valanginien as subdivisions of the Albien!

We know that the German Albien is sufficiently comprehensive; but it has not yet been stretched to this extent. It is merely that your reviewer, in his innocence, has been misled by finding the Albien standing a little apart in its place at the head of the column of 'stages'!

G. W. LAMPLUGH.

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#### TELMATOSAURUS, NEW NAME FOR THE DINOSAUR LIMNOSAURUS.

SIR,—Professor G. B. Fletcher has had the great kindness to inform me that the name *Limnosaurus*, which I proposed in 1899 for a new

Dinosaurian, was preoccupied by Marsh for a crocodile (1871). I therefore propose to name the Dinosaur mentioned (Nopcsa, *Denkschriften R. Akad. Wissensch. Wien*, 1899) *TELMATOSAURUS*.  
Baron F. NOPCSA, Jun.

VIENNA, *January 11th*, 1903.

#### GRANITE AND QUARTZ-VEINS.

SIR,—The paper by Mr. J. Lomas on "Quartz Dykes near Foxdale, Isle of Man," which appears in your January number (p. 34), raises an interesting question, and presents the argument in a cogent form. There can be no doubt that, on the fringe of a granite intrusion and in its apophyses, we sometimes find a gradual transition from normal granite, through various rocks which may be termed pegmatite, greisen, etc., to pure vein-quartz. Some phases of this transition are especially well displayed at Foxdale, a locality which I have already cited in this connection (*Q.J.G.S.*, 1895, vol. li, pp. 143, 144), and which has now been described in detail by Mr. Lomas.

Closer inquiry is, however, necessary before we can be warranted in regarding such quartz-veins as igneous rocks in the ordinary sense. There are many indications, both from the geological and from the petrographical side, that the more siliceous products in question, and especially the pure quartz-veins, belong at most to the waning stage of igneous activity, when the temperature had fallen and the agency of water had become a more important factor. Dr. Sorby's well-known researches on fluid cavities, for instance, strongly support this view (*Q.J.G.S.*, 1858, vol. xiv, pp. 471–475). But, further, there is sometimes reason to believe that, in these highly quartzose fringes and veins in very intimate connection with granite, a considerable part of the quartz has replaced felspar, and is therefore not strictly a primary mineral. One very clear example among others was described some years ago by Mr. Marr and myself on the edge of the Shap granite (*Q.J.G.S.*, 1891, vol. xlvii, p. 285). Here distinct pseudomorphs of quartz after felspar put the question beyond doubt. In the greisens of Cornwall and Saxony, the beresite of the Urals, and such peculiar rocks as 'pneuluxulyanite' and 'trowlesworthite', the occurrence of special 'pneumatolytic' minerals like tin-stone, topaz, tourmaline, and fluor is equally convincing. We must recognize the possibility of a like origin for veins of quartz, or of quartz and mica, even where no direct evidence of replacement is preserved; and the existence of an igneous magma composed of pure, or nearly pure, silica cannot as yet be regarded as proved.

ALFRED HARKER.

ST. JOHN'S COLLEGE, CAMBRIDGE.

*January 17th*, 1903.

#### THE TERM 'HEMERA.'

SIR,—Mr. Jukes-Browne seems to be haunted by the good word 'stratigraphical.' In the January number he finds fault with my